CLAIMS

1. A fine steel cord for reinforcing a synchronous belt, said fine steel cord comprising at least two strands, each of said strands comprising at least two steel filaments,
characterised in that
when being subjected to twenty load cycles, each load cycle starting at 0.2% of the breaking load of said fine steel cord going up to 20% of the breaking load of said fine steel cord and returning to 0.2% of the breaking load of said fine steel cord, said fine steel cord has a structural elongation on the return side of said twentieth load cycle of below 0.09 % at 0.2% of the breaking load of said fine steel cord.
2. The fine steel cord as in claim 1 wherein said structural elongation is below 0.06%.
3. The fine steel cord as in any of claim 1 or 2 wherein said load-elongation curve on said second to twentieth cycle remains in between two parallel, straight limiting lines said lines being 0.06% apart.
4. The fine steel cord as in any one of claims 1 to 3 wherein a straight line connecting the starting point and the turning point at said twentieth load cycle has a slope equivalent to an elongation modulus of more than 150 000 MPa.
5. The fine steel cord as in any one of claims 1 to 3 wherein a straight line connecting the starting point and the turning point at said twentieth load cycle has a slope equivalent to an elongation modulus of more than 170 000 MPa.
6. The fine steel cord as in any one of claims 1 to 3 wherein the elongation at 0.2% of the breaking load of the cord after the first cycle is below 0.03%.

7. A method of manufacturing a fine steel cord for reinforcing a synchronous belt according claim 1, said strands further having a breaking load, said strands having a first lay direction and a first number of twists per unit length in said cord N_c, said filaments having a second lay direction and a second number of twists per unit length in said strand N_s, said second lay direction being opposite to said first lay direction, said process comprising the steps of:
   - Providing said strands with a number of twists per unit length n_s lower or equal than the second number of twists per unit length N_s on strand spools (2)
   - Unwinding said spools (2) in a twister pay-off (1) with a pay-off tension
   - Assembling said strands at an assembly point (8) before the entrance pulley (9) of a bunching machine (13)
   - Winding said cord on a cord spool (12) after passing a reversing pulley (10)

   characterised in that
   said pay-off tension is higher than 15 % of the breaking load of the strand for shifting the final lay formation closer to the assembly point.
8. The method of manufacturing according claim 7 wherein the final lay formation is shifted to the assembly point by putting the said entrance pulley (9) or said reversing pulley (10) under an angle with respect to the plane formed by entering (51) and exiting cord (52).
9. The method of manufacturing according claim 7 or 8 wherein the twists applied by said bunching machine on said strands are uninterruptedly lead to the exit of said twister pay-off
10. The fine steel cord as in any one of claims 1 to 6 further comprising an elastomer coating, said coating for surrounding said single fine steel cord.
11. The fine steel cord as in claim 10 wherein said elastomer is polyurethane
12. The fine steel cord as in any one of claim 10 or 11 wherein said elastomer coating adheres to said fine steel cord.

13. The fine steel cord as in any one of clam 10 to 12 wherein said elastomer substantially surrounds every filament of said fine steel cord.

14. The use of fine steel cords as specified in any one of claims 1 to 6 and 10 to 13 as reinforcement in a synchronous belt.